Mormon Basin / Pedro Mountain Fuels Management Project
DOI-BLM-OR-V000-2009-004-EA

Decision Record

Prepared By:
U.S. Department of the Interior
Bureau of Land Management
Baker Resource Area
Baker City, Oregon 97814

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
BAKER FIELD OFFICE

Environmental Assessment Number DOI-BLM-OR-V000-2009-004-EA

DECISION RECORD

This decision record documents my decision to adopt the Mormon Basin/Pedro Mountain Fuels Management Project as presented under the proposed action analyzed in Environmental Assessment (EA): DOI-BLM-OR-V000-2009-004-EA.

Surveys for sensitive species were conducted within the project area. No consultation was required with National Oceanic and Atmospheric Administration (NOAA) fisheries and/or US Fish and Wildlife Service because there are no Endangered Species Act (ESA) species located within the project area watersheds.

There are no federally listed threatened or endangered plant species known or suspected to occur within the project area. Any Bureau special status species documented in or near the project area are being completely avoided or any effects mitigated through project design features.

Design elements are in place to avoid or mitigate any potential effects on archeological sites that are found during implementation. There will be no adverse effect to traditional food habitats. The proposed action will follow the protocol for Managing Cultural Resources on Lands Administered by the Bureau of Land Management in Oregon. This protocol describes how the BLM and the Oregon State Historic Preservation Office (SHPO) will cooperate under a national Programmatic Agreement to meet the requirements of Section 106 of the National Historic Preservation Act (Section 106 process). The proposed action will not cause the loss or destruction of significant scientific, cultural, or historical resources.

PUBLIC INVOLVEMENT

Public involvement consisted of separate face-to-face meetings with all involved permittees, potential cooperators, the Baker County, and the Oregon Department of Fish and Wildlife. The proposed action was directly mailed to the Confederated Tribes of the Umatilla (CTUIR) and the Burns Paiute tribal councils for review in 2008. A presentation concerning the project was made to the CTUIR cultural committee in 2010 and 2015.

Scoping of the proposed project was completed in 2009. Letters were sent to 15 individuals, groups and agencies that had expressed interest in BLM projects in November, 2009. Four letters were received back and the comments used to shape the proposed project. On January 21, 2015, a Notice of Internet Availability for the EA and Appendices were sent to 24 individuals, groups and agencies that had expressed an interest in the project. Also, a legal notice requesting public comment to the EA appeared in the *Baker City Herald* newspaper of Baker City on February 20, 2015. The EA was released for public comment from January 21, 2015, to February 20, 2015. As a result of this release of the EA, five comment letters were received.

Some clarification and additional supporting information was added to the EA due to some of the concerns raised in the letters. All concerns and issues raised, as well as the BLM responses, are included in a complete list of the comments received, found in Addendum 1 to this Decision Record.

A summary of the key issues/concerns raised includes:

- Travel and access management: Construction of new roads, skid trails, and landings fragments wildlife habitat, degrades water quality and spreads noxious weeds

- Treatment prescriptions: Treatment prescriptions should be appropriate for dry eastern Oregon woodlands and rangelands. Treatments should mimic natural processes, promote ecological diversity, protect old-growth, and not be driven by economics.

- Carbon sequestration/climate change: Forest thinning should be done in a way that maximizes carbon sequestration to help mitigate climate change.

- Juniper's role in the ecosystem: Removal of western juniper from the landscape can increase amounts of cheatgrass and medusahead annual grasses. Also, juniper's expansion was caused by grazing.

DECISION

My decision to select the proposed action is based upon the interdisciplinary analysis contained in the EA DOI-BLM-OR-V000-2009-004-EA and the comments received. This wildfire management decision will become effective on August 7, 2015. A notice will also be posted in the Baker City Herald.

Implementation of the proposed action will accomplish the following objectives:

- Restore fire as a natural process within the fire-dependent plant communities of the planning area to an extent that is feasible under the constraints of human safety, private property values, and resource values.

- Reduce fuel loading and continuity within ponderosa pine and Douglas-fir dominated forests and woodlands within the project area.

- Reduce the influence of western juniper and other conifer expansion within sagebrush–bunchgrass plant communities in the project area.

- Move riparian hardwood stand conditions toward their historical niche on the landscape.

- Enhance the number and vigor of shrubs within mountain mahogany stands by removal of competing western juniper and ponderosa pine.

- Improve the quality of wildlife habitat within the project area. Big game and sage-grouse habitat values that have been degraded by juniper encroachment within the project area will be enhanced under the proposed action.

- Restore plant communities through weed treatments and restoring fire on the landscape.

In addition, implementation of the proposed action will enhance cultural resources, and aquatic resources. Impacts on air quality, recreation, soils, noxious weeds, and water quality will be completely avoided or minimized through project design and monitoring. There will be some positive local socioeconomic effect.

Summary of Proposed Action

Silvicultural Thinning in Warm-Dry Forest for Fuels Reduction Treatment: Non-Commercial Thinning, Pile Burning, Underburn: This treatment will account for approximately 80% of treated forested acres (<3000 acres). Under this treatment, a variable density thinning from below silvicultural prescription, which would focus on removing smaller trees with no merchantable value would be followed by prescribed fire of warm-dry (Ponderosa pine, Douglas-fir mixed conifer) forested environments. From silvicultural thinning, approximately 999 Mbf of merchantable size timber over approximately 400 acres (2,475 bf/ac) will be offered as sawtimber through timber sales to utilize incidental timber created during restoration treatments. Silvicultural thinning in the rest of the project area will be conducted under stewardship contracting where any commercial timber removed will be traded for restoration and fuels reduction services. Biomass will be utilized if possible.

To reduce ladder fuels and interrupt initiation and spread of crown fires, trees (>9 inch dbh) will be thinned:

- with an average spacing of 16 feet
- to reduce canopy closure to a mean total of 40%
- to raise canopy base height to a mean of 20 feet above ground surface
- to reduce mistletoe in conifers with the upper two-thirds of a live crown infested
- retention densities will average between 20 to 80 feet of basal area
- the largest and most vigorous of ponderosa pine and Douglas-fir will be selected for retention
- following thinning, prescribed fire will be used to reduce fuel loads by a mean total of more than 50% in treated units

Conifers (<9 inch dbh) will be reduced to interrupt the initiation of a crown fire. Retained conifers of this size will be selected based upon density, fire potential, species fire resistance, future tree recruitment, site and surrounding vegetation while using variable density thinning.

Fuels generated by thinning activities will be treated by piling and burning, mechanical crushing or whole tree yarding. An underburn will be conducted within ten years of the thinning treatment to further reduce ground fuels (litter, twigs, branches <3") in the same stands.

Silvicultural Thinning in Hot-Dry Forest for Fuels Reduction Treatment: Non-Commercial Thinning, Pile Burning, Underburn: Under this treatment, a variable density thinning from below silvicultural prescription followed by prescribed fire of hot-dry (Ponderosa pine dominant) forested environments. This treatment will account for approximately 20% of treated forested acres, mostly along the southern flank of Pedro Mountain (<2000 acres). Biomass will be utilized if possible. Silvicultural thinning in the hot-dry forests will be conducted as stewardship where any commercial timber removed will be traded for restoration services.

To reduce ladder fuels and interrupt initiation and spread of crown fires, trees (>9 inch dbh) will be thinned:

- with an average spacing of 20 feet across all size classes
- to reduce canopy closure to a mean total of 30%
- to raise canopy base height to a mean of 22 feet above ground surface
- to reduce mistletoe in conifers with the upper two-thirds of a live crown infested
- retention densities will average between 6 to 40 feet of basal area
- the largest and most vigorous of ponderosa pine will be selected for retention
- following thinning, prescribed fire will be used to reduce fuel loads by a mean total of more than 50% in treated units

Mountain Big Sagebrush/Bunchgrass Restoration Treatment: Pile Burning, Broadcast Burning, Jackpot Burning, Herbicide Application for Non-native Annual Grass Control: There are approximately 6,300 acres of this plant community within the project area that are in the early or intermediate stages of transition to juniper woodlands.

- All conifers encroaching upon this community will be treated with a combination of manual cutting and prescribed fire.
- A broadcast application of herbicide may also be used where understories are dominated by exotic annual grass.
- Treat 80-90% of mountain big sagebrush communities that display any level of conifer encroachment.
- Reduce live conifer density within mountain big sagebrush/bunchgrass communities by a mean total of 70%.
- Pile burning and jackpot burning will be primary activities in this community.
- Broadcast burning may be considered for the mountain big sagebrush/bunch grass communities in phases II-III of conversion to juniper woodland within the Rooster Comb portion of the project area. Following a broadcast burn, all living western juniper remaining may be cut and burned in piles or jackpot burned.
- The remaining acreage may be treated by manually cutting conifers for piling and burning.

Low Elevation Sagebrush / Bunchgrass Restoration Treatment: Jackpot Burning, Pile Burning, Herbicide Application for Annual Grass Control: There are approximately 2000 acres of these plant communities within the lower elevations that are in the early to intermediate stages of transition to juniper woodlands. Western juniper encroaching upon these ecological

communities will be treated with a combination of manual cutting, prescribed fire, and herbicide applications.

- Treat 80 - 90% of communities that display any level of conifer encroachment.
- Reduce live conifer density by a mean total of 70%
- Reduce invasive annual grass cover by 70%.
- A broadcast application of a selective herbicide targeting non-native annual grasses will be considered under this treatment for areas where cheatgrass and medusahead wild rye are present in the understory.
- Conifer cutting followed by jackpot burning or pile burning and combined with application of a selective herbicide for annual grass control will be primary activities utilized in the Low Elevation Sagebrush/Bunchgrass restoration treatment.
- Small amounts (less than 100 acres) of the conifer cut and leave activity may be utilized in the low elevation sagebrush treatment areas if it can be applied without creating hazardous fuels.
- In no circumstance will stands of lower elevation Wyoming and/or basin big sagebrush be intentionally broadcast burned.

Mountain Shrub Maintenance / Riparian Hardwood Enhancement Treatment: Jackpot Burning, Pile Burning, Conifer Cutting: Under the Proposed Action, conifers encroaching upon identified stands of mountain mahogany, bitterbrush, riparian hardwoods such as aspen, will be cut, removed or burned to preserve and enhance these important wildlife habitats. Accomplishing this objective will result in no more than approximately 1500 treated acres within the planning area. Resource advisors will recommend application of this treatment option to the deciding official if sufficient bitterbrush, mahogany, or deciduous woody vegetation is identified on site.

- Treat 90 – 100 % of these areas affected by conifer encroachment where patches of at least 1/8 of an acre exist.
- Treat any upland groves of quaking aspen or deciduous woody riparian vegetation that are affected by conifer encroachment.
- Jackpot burning and pile burning will be the principal tools used under this treatment to reduce encroachment of conifers into stands while maintaining existing plants.
- Manual cutting of conifers with no follow-up burning may also be occasionally used in such stands.
- In aspen stands, up to 1/3 of older, dying aspen may be cut and left on site to rejuvenate sprouting. Late season broadcast burning will be applied for the purpose of aspen restoration wherever possible. This treatment may also include construction of woven wire exclosures around stands of aspen following the application of prescribed fire. Exclosures will remain in place until suckers or saplings attain a height that is above the reach of most grazing animals as determined by monitoring.

Broadcast application of herbicide for annual grass control: A broadcast application of the herbicide imazapic will be a primary activity applied under the Low Elevation Sagebrush/ Bunchgrass Restoration treatment in the Proposed Action. It may also be used as an activity under the Mountain Big Sagebrush/Bunchgrass treatment if deemed necessary by project

resource advisors. Application will always occur after prescribed burning of juniper piles or jackpots has occurred to decrease the amount of herbicide intercepted by downed trees.

Herbicide will be applied according to label requirements in the fall season (October – November) prior to grass emergence, using an ATV mounted sprayer. A follow up herbicide application in a subsequent year may be necessary to attain objectives of the sagebrush/ bunchgrass restoration treatments. Application of herbicide will be followed by seeding with a mixture of native and desirable non-native perennial grass and forb species. All pertinent Standard Operating Procedures (SOPs) and Mitigating Measures from the Vegetation Treatments Using Herbicides on BLM Lands in Oregon ROD (Oct 2010) will be observed during implementation.

Resource values are protected through observation of project design elements. Project design elements included in the proposed action include:

<u>Cultural, Special Status Vegetation, Wildlife</u>

- Protect cultural resource values throughout the life of the project. Archaeological sites will be avoided within the mechanical treatment units and activity generated fuels will not be piled within the boundaries of sites. Sites with combustible constituents will be protected during the deployment of prescribed fire by black-lining resources and use of appropriate ignition techniques. The BLM District Fire Archaeologist will review burn plans prior to project implementation.

- Protect special status vegetation species throughout the life of the project. Special status plant populations will be avoided within mechanical and herbicide treatment units if necessary. Fire intolerant sensitive plants will be protected during deployment of prescribed fire by black-lining resources and use of appropriate ignition techniques. The BLM District Fire Botanist will review all project implementation plans to ensure special status plant sites are appropriately protected.

- Minimize human disturbance within 5 acres of an active northern goshawk nest sites between March 1st and September 30th when possible.

- In hot/dry forests, retain at least two large (greater than 18 inches dbh, greater than 30 feet in height) snags per acre, and at least three large (greater than 12 inches diameter, greater than seven feet in length) downed logs per acre. In warm/dry forests, at least three large snags per acre greater than 18 inches dbh with at least five large downed logs per acre will be retained.

- Invasive juniper will be treated within a two mile buffer around Greater Sage-Grouse leks. Treatment methods will be limited to cutting, pile burning, and jackpot burning within the lek buffer areas. Treatments within the buffered areas will not take place between March 1 and June 15.

- Avoid cutting of conifers with old growth characteristics or obvious wildlife occupation (cavities or nests). Protection of such trees during all prescribed fire operations.

Silviculture Treatments

- Material hauled in all units will be restricted to dry or frozen ground conditions to prevent potential increases in soil compaction and sediment delivery to stream channels or wetlands.

- Ground-based thinning systems will not be used on slopes greater than 35%.

- Utilize previously constructed landings and skid trails to the fullest extent possible. Locate harvest facilities on existing disturbed sites such as roads, road shoulders, and borrow pits if existing landings and skid trails are not available. Landings should be located on level ground and should not require excavation.

- Utilize existing stream crossings (i.e., fords) where possible. New crossings will be approved by the fisheries biologist or other aquatic resource specialist(s).

- No ground-based heavy equipment will be utilized within a Riparian Management Area (RMA). Large diameter trees will be felled and left in place or removed with full suspension.

- Yarding activities will achieve full suspension over an active channel.

- Following skidding, skid trails will be assessed and rehabilitated as necessary by installing waterbars and/or employing methods that lift, fracture, and replace compacted soil to allow maximum infiltration of water.

- Where material during road excavation/grading will fall into or within RMAs, material will be end hauled (i.e., not sidecast) to suitable locations outside of RMAs.

- Prohibit storage and mixing of fuels and other chemicals, including refueling, within RMAs.

Prescribed Fire

- When using broadcast burning or under burning, ignition will occur outside of RMAs, although fire will be allowed to back into RMAs.

- When creating hand piles within RMAs, locate the piles a minimum of 25 feet from the top of the stream bank or steep slope break adjacent to the stream channel or wetland.

- Rake and spread litter and surface fuels away from the bases of all ponderosa pine and Douglas-fir trees retained in treatment areas that are 28" diameter at breast height (dbh) or greater. An area of bare mineral soil that is at least four feet in diameter will be created around each tree.

- Perennial grass seed may be applied with aerial/ground methods following prescribed fire on a case-by-case basis as monitoring data is gathered.

- Prescribed burning will follow the Oregon State Smoke Management Plan in order to protect air quality and reduce health and visibility impacts on designated areas.

- All burns will be planned based on either instructions given by, or in consultation with the Oregon Department of Forestry (ODF) and the State Implementation Plan (SIP) for prescribed fires and follow the Oregon State Smoke Management Plan.

- Livestock grazing may not occur for up to two growing seasons in portions of pastures that have been treated with broadcast burning, dependent upon monitoring results of fire intensity, vegetation recovery, and percentage of pasture burned. In addition, a season of rest from grazing may be necessary prior to a broadcast burn to allow for the development of a fine fuel ignition source. Agreements or separate grazing decisions will be issued to close areas to livestock grazing when necessary.

- Pastures that have been treated with a jackpot burning treatment may be rested for a period of up to two growing seasons, as monitoring results dictate, to allow for recovery of understory species.

Roads, Weeds, and Hydrology

Prior to and following prescribed fire and mechanical treatments, noxious weed populations in the area will be inventoried and spot applications of herbicide will be applied if necessary. Weed populations identified in the project area will be treated in accordance with the Vale District Integrated Weed Control Plan Environmental Assessment (EA No. OR-030-89-19 and the 2010 Vegetation Treatments Using Herbicides on BLM Lands in Oregon EIS.

- All vehicles and equipment used during implementation would be cleaned before and after treatments to guard against spreading noxious weeds.

- Cut and fill slopes will be designed at the normal angle of repose or less.

- Culvert outflow will not be discharged onto unprotected fill slopes.

- Water crossing structures will be designed to provide for adequate two-way fish passage, 25-year frequency flows, and a minimum impact on water quality.

- Temporary roads will be designed with adequate drainage systems (i.e., dips, waterbars, cross-drains) to minimize erosion and sediment delivery into streams or wetlands.

- Plan for the stabilization of exposed soil and for rehabilitation of other environmental damage during temporary road construction (See section 2.35 Connected Actions and Fig. 2.7 for more information).

Alternatives analyzed other than the proposed action include:

Alternative 1 - No Action: Under this alternative, there would be no application of prescribed fire, cutting of conifers in stands of mahogany or aspen, thinning of forestlands, or broadcast application of herbicide on low elevation stands of sagebrush with understories dominated by annual grasses. Conversion of rangelands to juniper woodlands within the planning area is occurring under the current management. The risk of a high intensity crown fire occurrence in the project area is also increasing as density and distribution of fuels are becoming increasingly hazardous. Management under the No Action Alternative would proceed under the current Baker RMP and all other relevant policy direction.

Alternative 3 – This alternative to the Proposed Action was developed to focus on fuels reduction and restoration objectives described in the Proposed Action while limiting impacts to soils, maintaining current road densities, and restricting the use of herbicide to spot applications on discrete stands of noxious weeds.

Treatment units which require new temporary road construction would be eliminated from treatment in Alternative 3 to reduce potential soil disturbance within the project area. This limitation would not allow construction of temporary roads and would therefore reduce the amount of silvicultural thinning described in the Proposed Action by 5-7%. Existing log skid routes and landings would be used where they exist and ground-based harvesting activities would be performed with low impact methods and equipment as much as possible.

Only spot applications of herbicide all together totaling less than 100 acres would be allowed for control of discrete stands of noxious weeds. Broadcast application of herbicide for annual grass control activity would not be used under this alternative and the sagebrush / bunchgrass restoration treatments described in the proposed action would not include objectives to reduce annual grass cover.

Two alternatives were considered but eliminated from detailed analysis. These included designating potential lands with wilderness characteristics and an alternative that would change grazing management. The first of these alternatives was not further analyzed because a 2009-2010 wilderness characteristics inventory was completed and no lands within or adjacent to the project area were found to exhibit wilderness character. The second alternative was not fully analyzed because it would not meet project objectives for restoring plant communities, wildlife habitat and fuels and juniper reduction; or would not be economically feasible or provide for public safety.

Rationale for Decision

After reviewing the EA developed for this project and the comments received on impacts, the BLM has selected the Proposed Action with the listed design elements. This alternative will meet the purpose and need by:

- The proposed action will reduce risks associated with large-scale, high severity wildland fire in the project area; especially in forests and woodlands that are adjacent to private and publicly owned forest lands.

- The proposed action will interrupt the transition of shrub-grassland and pine woodland plant communities to juniper woodlands within the project area. Fire will be restored as a key disturbance process within the planning area to an extent feasible under the constraints of human safety, private property values, and resource values.
- The proposed action will enhance stands of mountain mahogany and aspen within the project area.

CONFORMANCE WITH LAND USE PLANS, POLICIES AND PROGRAMS

The Proposed Action has been reviewed and found to be in conformance with the Baker Resource Management Plan (RMP) (1989) and federal fire management policy, as described in the National Fire Plan (2000), A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: Ten-Year Comprehensive Strategy (2001), and the local Baker County Community Wildfire Protection Plan (CWPP) (2012).

The Proposed Action has been found to be in conformance with Section 7(a)1 of the Endangered Species Act. It is in compliance with Federal laws that mandate the management of public land resources (Federal Land Policy and Management Act of 1976). It is in compliance with the various Federal laws, regulations, and Executive Orders dealing with cultural resources. In addition, the proposed action is in conformance with State, local, and Tribal land use plans, laws, and regulations.

The decision does not result in any undue or unnecessary environmental degradation. Resource values are protected through observation of project design elements.

The decision considered multiple resources and uses including wildlife habitat, riparian restoration, range, fisheries, cultural, local economies and communities, and forest health and fuels. The BLM concludes the selection of the proposed action best meets the fuels management and ecological restoration purpose and need statement. The proposed action will move approximately 15,289 acres of rangeland, forests, woodlands, and riparian habitat toward pre-settlement reference conditions. Additionally the project will improve sage-grouse and big game habitat within the Burnt River watershed.

AUTHORITY

This wildfire management decision will become effective on August 7, 2015. A notice will also be posted in the Baker City Herald.

Authority for this fuels reduction and treatments decision is found under Title 43 of the Code of Federal Regulations (CFR), subpart 5003.1 Effect of decisions; general (b) Notwithstanding the provisions of 43 CFR 4.21(a)(1), when BLM determines that vegetation, soil, or other resources on the public lands are at substantial risk of wildfire due to drought, fuels buildup, or other reasons, or at immediate risk of erosion or other damage due to wildfire, BLM may make a wildfire management decision made under this part and parts 5400 through 5510 of this chapter effective immediately or on a date established in the decision. Wildfire management includes but

is not limited to: (1) Fuel reduction or fuel treatment such as prescribed burns and mechanical, chemical, and biological thinning methods (with or without removal of thinned materials); and (2) Projects to stabilize and rehabilitate lands affected by wildfire.

The BLM has made the determination that vegetation, soil, or other resources on the public lands are at substantial risk of wildfire due to drought, fuels buildup, or other reasons, or at immediate risk of erosion or other damage due to wildfire because high fuel loading within coniferous forests, woodlands and rangelands has increased the risks of ground fires becoming crown fires, and small fires becoming stand-replacement wildfires. Reducing hazardous fuels will help protect life, property, and resource values, as well as increase the safety of personnel involved in wildland fire management actions. Degraded landscape conditions and threats to resources, private property and fire fighter safety were determined by comparing existing conditions of hazardous fuels, wildfire risks, rangeland plant communities, forest health, and wildlife habitat to the desired condition for those resources. Fire behavior in these areas can be expected to have low rates of spread, low fire intensities, and low flame lengths immediately following fuel treatment. (See EA at 1, 3, 78)

Thus, notwithstanding the provisions of 43 CFR 4.21(a) (1), filing a notice of appeal under 43 CFR Part 4 does not automatically suspend the effect of the decision. Appeal of this decision may be made to the Interior Board of Land Appeals in accordance with 43 CFR 4.410. The Interior Board of Land Appeals must decide an appeal of this decision within 60 days after all pleadings have been filed, and within 180 days after the appeal was filed as contained in 43 CFR 4.416.

RIGHT OF APPEAL

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and Form 1842-1. If an appeal is filed, your notice must be filed in the Baker Field Office, 3100 H Street, Baker City, Oregon 97814, within 30 days of receipt. The appellant has the burden of showing that the decision appealed is in error.

Filing an appeal does not by itself stay the effectiveness of a final BLM decision. If you wish to file a petition for a stay of the effectiveness of this decision, pursuant to 43 CFR 4.21, the petition for stay must accompany your notice of appeal. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

A petition for stay is required to show sufficient justification based on the standards listed below.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied.
2. The likelihood of the appellant's success on the merits.
3. The likelihood of immediate and irreparable harm if the stay is not granted.
4. Whether or not the public interest favors granting the stay.

A notice of appeal electronically transmitted (e.g. email, facsimile, or social media) will not be accepted as an appeal. Also, a petition for stay that is electronically transmitted (e.g., email, facsimile, or social media) will not be accepted as a petition for stay. Both of these documents must be received on paper at the office address above.

Persons named in the *Copies sent to:* sections of this decision are considered to be persons "named in the decision from which the appeal is taken." Thus, copies of the notice of appeal and petition for a stay must also be served on these parties, in addition to any party who is named elsewhere in this decision (see 43 CFR 4.413(a) & 43 CFR 4.21(b)(3)) and the appropriate Office of the Solicitor (see 43 CFR 4.413(a), (c)) **Office of the Solicitor, US Department of the Interior, Pacific Northwest Region, 805 SW Broadway, Suite 600, Portland, Oregon 97205,** at the same time the original documents are filed with this office. For privacy reasons, if the decision is posted on the internet, the *Copies sent to:* section will be attached to a notification of internet availability and persons named in that section are also considered to be persons "named in the decision from which the appeal is taken."

Any person named in the decision, *Copies sent to:* section of the decision, or who received a notification of internet availability that receives a copy of a petition for a stay and/or an appeal and wishes to respond, see 43 CFR 4.21(b) for procedures to follow.

CONTACT PERSON

For additional information concerning this decision, contact Eric Ott, Forester, Vale BLM, 3100 H Street, Baker City, Oregon 97814; telephone (541) 523-1411.

Lori D. Wood
Baker Resource Area Field Manager

7/8/15
Date

ADDENDUM 1 – PUBLIC COMMENTS AND RESPONSES

On January 21, 2015, a Notice of Internet Availability for the EA and Appendices were sent to 24 individuals, groups and agencies that had expressed an interest in the project. Also, a legal notice requesting public comment to the EA appeared in the *Baker City Herald* newspaper of Baker City on February 20, 2015. The EA was released for public comment from January 21, 2015, to February 20, 2015. As a result of this release of the EA, five comment letters were received.

Some clarification and additional supporting information was added to the EA due to some of the concerns raised in the letters. All concerns and issues raised, as well as the BLM responses, are included in a complete list of the comments received, found in this Addendum to the Decision Record.

Person/Group	Comment	BLM Response
Doug Heiken Oregon Wild **Email received Feb 18, 2015** **Comment 1**	Encroaching juniper is sequestering carbon and may offset greenhouse gas emissions.	A review of the best available science leads the Vale District BLM to believe that the Proposed Action will not result in converting the project area into a carbon source (i.e. releasing more carbon than what is taken in). Specifically, native healthy sagebrush stands, in which the Baker habitat project promotes, have been shown to also be carbon sinks just as Phase I and II juniper stands with a native shrub understory (Rue 2010). It is possible that increasing juniper tree cover could increase biomass and C storage and thus increase the strength of the carbon sink (taking in more carbon than the amount released). However, due to the frequency of fire in ecosystems such as this (15-100 yr) expansion woodlands should not be considered long-term C storage because C in biomass is released to the atmosphere during fire and subsequent decomposition (Miller and Tausch 2001; Canadell and Raupach 2008; Hurteau and North 2009). Also, allowing juniper stands to progress to Phase III stands drastically increases the probability of converting the site to a monoculture of non-native annual grass following a disturbance. Non-native annual grass monocultures are carbon sources and would have an adverse impact to climate change. Some researchers have suggested that Carbon storage decisions must consider not only the current vegetation state, but also future states and the potential effects of climate change and exotic invasion on the fire regime associated with those states.

Comment 2	USGS says, "This woodland expansion is largely a result of a combination of fire suppression and overgrazing. These factors lead to a decline of browse and grass species that competitively exclude juniper and provide the fuels to carry fires that restrict junipers to rocky sites (Burkhardt and Tisdale 1976)." USGS, Status and Trends of the Nation's Biological Resources, Great Basin-Mojave Region.http://web.archive.org/web/20060216143536/http://www.ccsn.nevada.edu/science/Charlet/GREAT-BN.PDF. This project is dealing with the symptoms instead of the cause of juniper expansion. Livestock grazing and fire suppression must not only be included in the NEPA description, but should be changed in the NEPA decision. Extensive livestock grazing began in the late 1800s in many parts of the western U.S. (Wooton 1908, Oliphant 1968, Dahms and Geils 1997, Scurlock 1998, Allen et al. 2002, Hessburg and Agee 2003) and extensive infill and expansion of piñon and juniper began at the same time in many areas (e.g., Miller and Rose 1999, Fuchs 2002, Landis and Bailey 2005; C. D. Allen unpublished data). The coincidence in time between the onset of grazing and of increasing tree density suggests a direct cause-effect relationship, the mechanism presumably being that heavy grazing reduced herbaceous competition with tree seedlings and thereby enhanced seedling survival. Support for this mechanism comes from Johnsen's (1962) report of markedly better growth of juvenile Juniperus monosperma in places where grass had been removed.	The manuscripts referenced were written at a time when overgrazing was occurring on federal lands. In fact, all manuscripts reference high to severe grazing intensities. However; since this time the Baker Resource Area has reduced total AUMs by 33 percent, which has resulted in slight to moderate grazing intensities. Current grazing practices do allow sufficient fine fuels to carry fire through the sagebrush ecosystems. Therefore the literature referenced does not apply to this project. Under current conditions, allowing wildfire to burn through Phase I and II juniper stands in the project area would result in an increased probability of converting the site to a non-native annual grass community which has been shown to be carbon sources (Rau 2010). Therefore, allowing wild fire to remove juniper "naturally" has the potential to have adverse impacts on 9,000 acres of sagebrush within the project area and reducing the global carbon sequestration.

Comment 3	The indirect effect of livestock grazing also may have been important because sustained heavy grazing reduces grasses and other herbaceous fuels which foster fire spread under both modal and extreme fire weather conditions. In some western ponderosa pine and dry mixed conifer forests, exclusion of low-severity fires has been a principal mechanism driving tree density increases during the twentieth century (e.g., Allen et al. 2002, Hessburg and Agee 2003)	This comment is correct that sustained heavy grazing reduces grasses and other herbaceous fuels which foster fire spread under both moderate and extreme fire weather conditions. However, the Baker Resource Area reduced livestock grazing AUMs starting in the early 1950s to the late 1980s which has resulted in slight to moderate livestock use in the project area.
Comment 4	Juniper trees, along with their berries, provide food and shelter to over sixty species of birds. The Townsend's Solitaire is highly dependent on juniper berries for winter food. The scientific basis for juniper control is highly questionable. Juniper will take care of itself after you remove livestock and reintroduce fire.	It is true that the juniper trees provide food and shelter for some bird species; however, the juniper is expanding into areas that provide habitat for species where the habitat quality is reduced by juniper presence. One such species is the sage-grouse which has been deemed by Fish and Wildlife as Warranted but Precluded for listing as an Endangered Species.
Comment 5	Juniper does not increase weeds, reducing water infiltration, dries up springs and streams, increases erosion, reduces biodiversity, and reduces the quality and quantity of forage for livestock and wildlife species.	It is true that the scientific research shows mixed results on juniper drying up springs and streams and the results are anecdotal and no quantitative study could be found. Therefore, all references to increasing water yield were removed from this document. However, there is a wealth of research showing Phase III juniper expansion has negative impacts on soil erosion, biodiversity, and reduces the quality and quantity of forage for livestock and wildlife.

Comment 6	Livestock, by annual elimination of herbaceous cover, can cause many of the same effects as juniper encroachment, and many other effects that are far more deleterious. We propose the agency remove livestock and reintroduce fire before controlling juniper. By removing livestock maybe the herbaceous component can increase enough to carry fire and kill some of the juniper trees to reestablish a mosaic of fire driven seral development.	See response to comment 7.

Comment 7	An EIS should be prepared to discuss whether removing livestock, reintroducing fire, and removing roads would be as effective or more effective than juniper control in restoring hydrologic function, fire ecology, and vegetation composition.	The BLM has determined that there are no significant impacts to the quality of the human environment, and therefore preparation of an EIS is not required. The BLM must prepare an EIS for major Federal actions with a significant effect on the quality of the human environment. 42 U.S.C. 4332(2)(C). A determination of significance under NEPA requires a consideration of both context and intensity, using the ten factors described in the CEQ regulations. 40 C.F.R. 1508.27. A "rule of reason" determines whether and to what extent available information requires the preparation of an EIS. Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 373 (1989). Where the preparation of an EIS would serve no purpose, an agency is not required to prepare one. Dep't of Transp. v. Public Citizen, 541 U.S. 752, 767 (2004). A BLM decision to not prepare an EIS will be upheld if the BLM demonstrates that it has taken a "hard look" at the potential impacts, and demonstrates that no significant impact will result. American Bird Conservancy, Inc. v. F.C.C., 516 F.3d 1027, 1034 (D.C. Cir. 2008); Cabinet Mountains Wilderness v. Peterson, 685 F.2d 678, 681-82 (D.C. Cir. 1982); Umpqua Watersheds, Inc., 158 IBLA 62 ,67 (2002); In Re North Murphy Timber Sale, 146 IBLA 305, 310 (1998) n. 8; Nez Perce Tribal Executive Committee, 120 IBLA 34, 37-38 (1991)). Removing livestock grazing and reintroducing fire would result in significant adverse impacts to vegetation resources within the project area. Specifically, Bates 2009 found that long term protection from livestock resulted in fuel loads high enough to kill native perennial grasses which allows non-native annual grasses to dominate the site. Therefore, a non-grazing and burning alternative will not be further analyzed.

Comment 8	Removing juniper can increase cover of weeds such as cheatgrass at the expense of other native plants. http://www.bioone.org/doi/abs/10.1614/IPSM-07-008.1. In fact, juniper is associated with native vegetation cover, while removing juniper tends to spread and increase weeds. [I]t is a significant challenge for land managers to apply thinning and burning fuel treatments in a manner that does not exacerbate existing weed and associated resource problems. The potential for weed problems is greater at the wildland urban interface (WUI), where diverse source propagules are abundant. We evaluated the effects of fuel reduction activities (thinning, slash pile burning, skid trail formation) and two native seeding treatments (cultivar and local seed) on exotic weed populations and native vegetation in an eastern Oregon juniper woodland … We found that the fuel reduction activities and post-treatment seeding introduced and spread exotic Species … [O]ur data indicated that pretreatment juniper abundance was positively associated with native perennial cover, and negatively associated with exotic species cover. These patterns, coupled with the impact of fuel reductions activities, suggest that reducing juniper abundance may not lead to the restoration of native plant community composition even if native treatments are used post-disturbance. Our results suggest that high rates of post fuel reduction seeding in highly invaded juniper woodlands with highpropagule pressure, which might be prohibitively expensive for normal management operations, may be effective at establishing high total and native cover, but may still be ineffective at controlling exotic species in areas.	Oregon Wild is correct that scientific literature shows that following juniper removal cheatgrass does in fact increase, however the paper Oregon Wild cites only documents cheatgrass response over a short time period. A study conducted by Bates et al (2005) showed the same short term increase in cheatgrass production, however within 13 years of treatment, cheatgrass was reduced to pretreatment levels. Also, a scientific manuscript conducted by Bates and Svejcar (2009) documents that the short term increase in cheatgrass can be drastically reduced if burning occurred during the winter months when the soil was either saturated with water or frozen. All burning in the Mormon Basin Fuels Reduction project will occur when soils are saturated with water or frozen and the BLM believes that a short term increase in cheatgrass production will occur, however within 12-13 years cheatgrass will reduce down to pretreatment levels. In addition to the juniper treatment, the BLM is proposing an herbicide treatment within the project area, which will help restore native plant communities. The BLM expects that native grass production to increase due to reduced competition with juniper and the control of cheatgrass.

Comment 9	We urge BLM to recognize that fuels reduction is a very narrow purpose for management of public lands. BLM should also recognize that healthy ecosystems are relatively resilient to disturbance by fire and other natural processes. Instead of focusing narrowly on fuel reduction, with the risk of sacrificing other ecological goals, BLM should focus on ecological restoration, with fuel hazard reduction as a by-product.	The BLM agrees that a project should incorporate as many possible improvements to a landscape as possible to maintain and restore healthy ecosystems. This is why the BLM analyzed water, soils, wetlands, fish and wildlife, air, vegetation (including forest, non-forest, noxious weeds, and special status plants), cultural, grazing, fire, recreation and visual resources, socioeconomics and climate change in the EA. Although funding does dictate what the Baker Field Office can accomplish on the ground, our proposed actions do incorporate returning natural processes such as fire in such a way to benefit and enhance a healthy ecosystem.
Comment 10	The EA lacks a Table quantitatively summarizing the proposed action and alternatives.	Thank you for your comment. Although helpful, a summarizing table is not necessary.
Comment 11	This is a large project with potentially significant effects. An EIS may be necessary. The FOSI/FONSI should be carefully analyzed for significance.	The BLM has determined that there are no significant impacts to the quality of the human environment, and therefore preparation of an EIS is not required. The BLM must prepare an EIS for major Federal actions with a significant effect on the quality of the human environment. 42 U.S.C. 4332(2)(C). A determination of significance under NEPA requires a consideration of both context and intensity, using the ten factors described in the CEQ regulations. 40 C.F.R. 1508.27. A "rule of reason" determines whether and to what extent available information requires the preparation of an EIS. Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 373 (1989). Where the preparation of an EIS would serve no purpose, an agency is not required to prepare one. Dep't of Transp. v. Public Citizen, 541 U.S. 752, 767 (2004). A BLM decision to not prepare an EIS will be upheld if the BLM demonstrates that it has taken a "hard look" at the potential impacts, and demonstrates that no significant impact will result. American Bird Conservancy, Inc. v. F.C.C., 516 F.3d 1027, 1034 (D.C. Cir. 2008); Cabinet Mountains Wilderness v. Peterson, 685 F.2d 678, 681-82 (D.C. Cir. 1982); Umpqua Watersheds, Inc., 158 IBLA 62 ,67 (2002); In Re North Murphy Timber Sale, 146 IBLA 305, 310 (1998) n. 8; Nez Perce Tribal Executive Committee, 120 IBLA 34, 37-38 (1991)).

Comment 12	All large and old trees (including juniper) should be retained. We request a design element protecting all large trees and all old trees regardless of size.	It is stated on page 11 most large and old trees will be left. It is stated on page 66 that all old growth juniper will be left. Although the proposed action does not include diameter limits during silvicultural thinning, variable density thinning will retain trees of all diameter sizes (primarily retaining the largest and most fire resilient trees) and promote a healthy, dry, Douglas-fir/ponderosa pine forest. Large diameter ponderosa pine and Douglas-fir will be represented in this forest following treatment. This includes retaining existing snags and recruitment of future snags and large woody debris (see Pages 23 and 67 of the EA). To achieve the purpose and need of this EA, the BLM will focus on restoring natural processes (as Oregon Wild suggested) instead of focusing on arbitrary diameter limits.
Comment 13	Please avoid road construction and soil disturbance as much as possible. Roads are not part of the historic range of variability and roads (including temporary roads) have numerous long-term adverse impacts on soil, water and vegetation and wildlife. There are already too many roads on the landscape. Areas that are not accessible from existing roads should be treated non-commercially.	No new roads will be constructed. At most, three miles of temporary road will be constructed which will be rehabilitated after a single season of use. Temporary roads will be laid out and reclaimed according to the BLM forester's and fish and water specialists' highest possible standards. These project design elements are expected to reduce the short term negative impact to negligible upon the environment (see pages 23-25). Further, all existing skid trails and landings will be utilized.
Comment 14	We urge that juniper reduction be done without using heavy equipment and without removing the trees (except within 100 feet of roads).	Whenever possible, juniper reduction will be conducted by prescribed fire. In cases where this is not economically feasible or conflicts with other ecosystem and safety values, juniper reduction will need to be conducted by either machines or by hand. Hand treatments will be given priority over machine treatments for areas far from roads or on steep terrain. When heavy equipment is used, all Project Design Elements will be followed to minimize impact.
Comment 15	Widespread herbicide application is a potentially troubling activity unless it can be assured that it is a one-time treatment. BLM should do everything possible to ensure that this treatment is used as a last result and that it will result in a transition to diverse native rangeland vegetation community.	Broadcast treatments would occur only in the Mountain Big Sagebrush/Perennial Bunchgrass and Low Elevation Sagebrush/Perennial Bunchgrass communities where invasive annual grasses dominate the understory. Herbicide application will only be conducted as spot treatments on discreet patches of noxious weeds in all other vegetation types within the project area. Treatments of either type would occur only once per year on any

		given site. Follow up treatments in subsequent years may be necessary until the soil seed bank is depleted. The herbicide proposed for invasive annual grass control (imazapic) is selective and would not harm desirable plants. Reducing competition from invasive annual grasses would improve vigor of the desirable plants allowing them to expand, thus making these areas resistant to further degradation. In areas where there is not an adequate amount of remnant desirable plants to recolonize the site, seeding would occur.
Comment 16	Thinning dry forests results in a mix of beneficial and adverse impacts. BLM should carefully consider trade-offs and use the recommendations below to help realize net ecological benefits.	The BLM agrees. The BLM is taking on the thinning portion of this project, in part, to help restore ecological processes. Adverse impacts would be negligible and short term, while beneficial impacts would be moderate to major for the long term.
Comment 17	BLM should recognize the role of livestock in conifer encroachment. Conifers reduce the vigor of palatable plants such as bunchgrasses, making more resources available for conifers. Livestock also disturbance the soil and create a favorable seedbed for conifer regeneration. Finally, livestock modify fuel structure in ways that are not beneficial.	Permitting of livestock grazing use is beyond the scope of this project. The purpose of this project is to reduce hazardous fuel loading and restore woodlands, riparian areas and rangelands. The BLM believes that current livestock grazing is not facilitating juniper encroachment, and the current level of grazing use occurring in the project area (slight to moderate) leaves sufficient residual vegetation to carry fire. See pages 7 and 8 of the EA for additional information.
Comment 18	BLM should address climate change and strive to store more carbon in ecosystems. This project will increase carbon emissions to the atmosphere which is moving things in the wrong direction. BLM cannot minimize this project's impact on climate change. Global warming and ocean acidification are the result of cumulative impacts from millions of projects like this. There is no "silver bullet" that will solve the problem. All sectors of the economy and all projects like this must take the issue seriously and make adjustments to increase carbon ecosystem storage. See below.	Without fire, simply increasing woody biomass does increase sequestered carbon (which influences climate change). But we must also manage for the very real possibility of a stand replacing fire that could turn the forest into a net carbon source. Fire exclusion is partially responsible for the increased threat of large stand replacing fires and releasing large amounts of carbon. The BLM proposes to reintroduce natural fire regimes into the project area to mimic historical conditions, while maintaining carbon sinks and managing to increase future sinks. Further, excluding fire does not take into account restoring natural processes and the historical range of variability within the project area as Oregon Wild has requested of the BLM. Increased juniper is not only occurring at unprecedented levels, it has drastically increased the risk of large stand replacing fires, increased fire spread, and compromises safety of wildland fire fighters and those

		with homes within the juniper woodlands. Increased wildfires of this size significantly increase the release of carbon into the atmosphere.
Comment 19 **General recommendations for dry-forest thinning**	When conducting commercial thinning projects take the opportunity to implement other critical aspects of watershed restoration especially reducing the impacts of the road system and livestock grazing and establishing the ecological processes that will allow streams and fire regimes to recover.	Reducing fuels and restoring fire to the fire-dependent ecosystems within the Mormon Basin/Pedro Mountain Fuels Management Project Area will improve watershed values and the distribution of livestock in the grazing allotments. It will also mimic the natural fire regime reducing high fuel loads that will allow us to use fire as a natural disturbance.
Comment 20	Don't waste too much effort restoring forest structure when doing so will require continuous expenditure of money and effort to maintain. Use scarce resources efficiently by striving to restore ecological processes that can be self-sustaining. Recognize that insects and disease are natural ecological processes that actually help improve landscape diversity. Recognize that tree mortality recruits valuable habitat structures and makes resources available which increase the vigor of surviving trees, thus accomplishing many of the objectives of mechanical density reduction projects. Don't focus too much on tree health, but think instead about forest ecosystem health. Use natural processes where it makes sense to do so	We propose to reintroduce/use fire into the ecosystem to mimic natural processes which will accomplish this. Insects and disease are present. Our goal is not to rid the forest of them, but to generally improve forest health under the overarching goal of reducing fuels, restoring plant communities and improving wildlife habitat.
Comment 21	There are a lot of people calling for an increase in the "pace and scale" of restoration on eastside forests. The large size of recent projects raises concerns because the agency may run out of things to do. If the agency moves too fast, they will be done with "restoration" but they will still have a timber target. If the agency proceeds at a more measured and sustainable pace, they can continue to harmonize restoration and timber goals for longer. This should be considered in the NEPA analysis.	The Mormon Basin/Pedro Mountain was identified as #6 (of 20) priority for restoration under the 1989 Baker FO RMP. It is described on pages 10-12 that only 6,500ac (3,000ac of warm/dry, 2,000ac of hot/dry and 1,500ac of aspen/riparian/mountain mahogany) would occur in a forested setting. The rest is within the sagebrush vegetation communities as juniper treatments. Since that time, there have been several medium and small sized fires in the area that were very close to entering the forested area. The high density of stems within the juniper and forested stands leave the area at a high risk of large stand replacing fires. The current Baker RMP directs an approximate 24,000Mbf of Allowable Sale Quantity (ASQ) timber harvest over 10 years from

		the commercial forest land base in the Baker Resource Area (BRA). Currently, the BRA has harvested 2775 Mbf (approximately 10% of ASQ) over the last 10 years, none within the proposed Project Area, which is well below sustainable levels. If the intent of this project, or any project in the past ten years was to meet an ASQ commitment, the average harvested volumes would be much higher. During the same past ten years, the total non-juniper forested acres that have been restoratively treated are approximately 1000 acres of 37,494 acres. This is approximately 2.67% of the forested land base, and at this pace it would not be possible for BRA to run out of areas in which to conduct restoration treatments. It should also be noted that the Preferred Alternative in the pending Baker RMP Revision focusses on restorative forest treatments and allows for a maximum decadal Proposed Sale Quantity (PSQ) of 10,000 Mbf to be commercially thinned from 3,000 acres per decade. This equates to just under 10% of the non-juniper forested land base per decade.
Comment 22	Treated stands do not exist in isolation, so be sure to consider the effects of thinning on adjacent areas which may provide habitat for species of concern. Prepare a "risk map" based on proximity to different habitat types from high quality to non-habitat.	All wildlife and plant concerns were considered and analyzed in their appropriate sections as you described. Thin from below, variable density thinning is being used along with riparian habitat buffers. There are isolated pockets that are without access to treat as outlined in the EA. See project maps (Fig. 1.1, 2.1-2.6). Sensitive species were addressed in the wildlife and special status plants section. These areas, if encountered will be avoided if it helps the BLM listed sensitive species (some may be fire-adapted).
Comment 23	Only a small subset of needed restoration activities are "profitable," so we can't let logging economics determine restoration priorities. If we restore primarily those areas that have commercial-sized logs and fail to treat the thousands of acres of areas that need restoration but lack economic return, we will not be accomplishing real restoration which requires carefully and strategically choosing the subset of the landscape that can be treated to provide the greatest gain (both ecological and fire hazard reduction) for the least ecological	On page 3 you will find: "The purpose of the Proposed Action is to achieve management objectives described in the Baker Resource Area Resource Management Plan (RMP) Record of Decision within the Mormon Basin / Pedro Mountain planning area by: 1) Reducing hazardous fuels 2) Restoring plant communities 3) Improving wildlife habitat diversity

	"cost" in terms of soil, water, wildlife, carbon, and weeds. "Hoping to boost their economies and also restore these forests, local leaders are interested in the economic value of timber that might be available from thinning treatments on these lands. … [W]e found that on lands where active forestry is allowable, thinning of most densely stocked stands would not be economically viable." Allowing economics to drive these choices will result in greater ecological impacts and lower ecological gains. The NEPA analysis must honestly disclose what optimum restoration treatments would look like versus what is actually being proposed, so the public can see what's being sacrificed.	The need for action is based on degraded landscape conditions due to increased fuel conditions, increased noxious weeds and threats to resources, private property and fire fighter safety. This was determined by comparing existing conditions of hazardous fuels, wildfire risks, rangeland plant communities, forest health, and wildlife habitat to the desired condition for those resources." Within the purpose and need of this project, the EA honestly states the optimum restoration treatments. The BLM stated in the EA that the project will be a combination of small timber sales (no more than 5 with an average acreage of 100ac) and stewardship (which trades the economic value of timber to help restore various ecosystem functions).
Comment 24	Protect soil and water quality by avoiding ground-based logging and log hauling during the wet season.	This, along with other protective measures, are outlined in the project design elements (Sec 2.5, pg 23), proposed action activity descriptions (Appendix B, pg 101) and monitoring plan (Appendix A, pg 97)
Comment 25	Thinning should focus on areas accessible from existing roads. Building new roads will cause degradation that typically erases any alleged benefit of treatments. Inaccessible areas can be treated non-commercially or become part of the landscape mosaic that is untreated and serve important ecological values such as dense forest cover, carbon storage, and natural rates of snag recruitment.	Project design elements have mitigated any effects that the proposed three miles of temporary roads will have on the project area (Sec 2.5, pg 23). See the water (sec 4.2, pg 56) and soil (Sec 4.3, pg 59) sections for a further discussion on surface disturbance.
Comment 26	Where road building is necessary, ensure that the realized restoration benefits far outweigh the adverse impacts of the road. Carefully consider the effects of roads on connectivity, especially at road/stream crossings, across ridge tops, and midslope hydrological processes (such as large wood delivery routes). The NEPA analysis should rank new road segments according to their relative costs (e.g. length, slope position, soil type, ease of rehabilitation, weed risk, native vegetation impacts, etc.) and benefits (e.g. acres of restoration facilitated), then use that ranking to consider dropping the	Project design elements have mitigated the effects that the proposed three miles of temporary roads will have on the project area (such as no stream crossings and being constructed and decommissioned within a single year). Please see the project design elements (Sec 2.5, pg 23) and the water (sec 4.2, pg 56) and soil (Sec 4.3, pg 59) sections for a further discussion on surface disturbance.

	roads with the lowest ratio of benefits to costs. Once the relative acres accessed per mile of road is determined, take the analysis one step further and determine the "effective road density" of each segment. In other words, extrapolate as if that much road were required to reach each acre of the planning area, then compare the resulting road density to RMP objectives for big game, fish conservation, cumulative hydrological impact, etc?	
Comment 27	Use the historic range of variability as a guide, but don't just focus on seral stage. Consider also the historic abundance of ecological attributes like large trees, large snags, the scale and distribution of patches of dense forest, low road density, roadless areas, etc., all of which have been severely reduced from historic norms. Also, consider the natural range of variability, which is the historic range of variability as modified by future climate change and fire suppression	Both action alternatives would result in an increase of ecological diversity and mosaic vegetation patterns across the landscape while moving shrub-steppe and woodland communities toward historic conditions. Treatments would focus on removing western juniper from sagebrush-steppe communities and from patches of riparian hardwoods and mountain mahogany, promoting retention of those species in the project area. Other treatments would thin overstocked conifer stands and reduce the threat of stand-replacement wildfire within forests and woodlands. Woodland underburns and jackpot burning will also result in a mosaic pattern of burned and unburned patches across the landscape while reducing surface fuel loading. There are project design elements in place to address snag and downed wood retention.
Comment 28	Develop restoration treatments appropriate to each forest type or plant association group (PAG). Dry Ponderosa pine forests that have significant ingrowth due to fire exclusion are good candidates for thinning. Mixed-conifer forest types often included some dense forest patches, so they should be retained at appropriate scales. Lodgepole pine and subalpine forests have stand replacing fire regimes and generally do not need to be thinned or regenerated.	This is in the EA as hot-dry forests and warm-dry forests. Separate treatments for each forest type are clearly proposed with warm-dry forests retaining more basal area than hot-dry forests. Subalpine and Lodgepole forests are not found in the project area or addressed. Please see Chapter 3.5.4 and particularly Table 3.3 of the EA.
Comment 29	Prioritize treating stands that are already degraded by past logging, and place less priority on treating previously unlogged forests.	There are no unlogged areas, and our priority will be to address the stands by fire potential and ability to restore plant and wildlife habitats - not by previous land history. Areas with probability of potentially catastrophic wildfire which would destroy habitat and threaten private lands will be part of that priority.
Comment 30	Prioritize treating dry forest types at low elevation and on south slopes. Treatments in forests with naturally mixed-	Both action alternatives would result in an increase of ecological diversity and mosaic vegetation patterns across the landscape

	severity fire regimes should be carefully scrutinized to ensure those areas (i) are in fact outside of the HRV, and (ii) treatment will not remove scarce habitat for focal species that depend on dense forests, and (iii) treatments are in fact needed and (iv) proposed treatments will be effective. Treatments in mixed severity fire regimes should be more patchy and leave behind more structure, more snags and large dead wood.	while moving shrub-steppe and woodland communities toward historic conditions. Based on access and treatment need, some areas will be left untreated creating patches of dense forest and woodland. Snag and deadwood retention is addressed in the EA under the project design elements but in general, all snags would be retained that do not interfere with the safety of operations.
Comment 31	Removing large numbers of small trees and forest understory across large areas may not be consistent with historic forest conditions. New evidence indicates that small trees were more common in dry forests than previously recognized. Historically, more than 60% of trees in the Blue Mountains and eastern Cascades were "small" (<40 cm or <16" dbh).	See response to comment 30.
Comment 32	New evidence indicates that far more of the "dry" forests, rather than being typified low severity fire regimes, were in fact dominated by mixed severity fire regimes (including significant areas of stand replacing fire), so mixed severity fire is an important part of the historic range of variability that should be restored. The goal should not be a uniform low severity fire regime, but rather a wide mix of tree densities in patches of varying sizes. This objective can often be met by allowing natural fire regimes to operate, or by leaving significant areas untreated when planning fuel reduction projects.	Based upon our riparian buffers, patchwork of forestry treatments, variable density thinning and selective areas to be burned using several burning techniques, a mosaic will be created mimicking natural fire processes. Although a large majority of the Mormon Basin/Pedro Mountain Project Area is considered a sagebrush-steppe type of habitat (~68%), some is classified as forest or woodland. Considering the current condition of these forested stands, the threat of a wildfire becoming a catastrophic stand replacement fire is excessively high (FRCC 3 in forest stands). A wildfire occurring in these conditions would likely not result in a mosaic of mixed severity fire. Therefore, with our proposed treatments we are trying to reduce the risk of catastrophic fire while mimicking some of the effects of a mixed severity fire through variable tree spacing thinning prescriptions. There will be a sufficient amount of area remaining untreated in every unit to provide habitat and vegetative diversity.
Comment 33	We have learned that forest thinning is rarely effective under extreme burning conditions, and the severity of fire in adjacent forests has little to do with whether a home burns," said Tania Schoennagel, who also is affiliated with CU-Boulder's geography department. "Solely relying on public	The fuel treatments are not classified as WUI. Our intention is to achieve management objectives set forth in the Baker RMP by: 1) Reducing hazardous fuels 2) Restoring plant communities

	forest management to prevent homes burning by wildfire is simply barking up the wrong tree. We need more integrated solutions that cross the public-private land boundary to help us coexist with inevitable wildfire."	3) Improving wildlife habitat diversity
Comment 34	Prioritize treatment of the dense young stands that are most "plastic" and amenable to restoration. Another priority is to carefully plan and narrowly target treatments to protect specific groves of fire-resistant, old-growth trees that are threatened by ingrowth of small fuels, but don't focus on rigid density reduction targets. Leave all medium and large trees that show old-growth characteristics.	Treatment of dense young stands of forest conifers are a priority for this project as they often contribute to the movement of a ground fire into a stand replacement fire. Likewise, Phase 1 and 2 juniper are prioritized for treatment for their ability to severely increase the complexity, damage and risk in wildland fire management. In general, the largest, most fire resistant conifers are to be retained.
Comment 35	Thin from below, retaining the largest trees, or use "free thinning" with a diameter cap so that some trees of all size classes are retained. Retain all large trees and most medium sized trees so they can recruit into the larger classes of trees and snags. In the face of uncertainty that is exacerbated by climate change, a bet-hedging strategy should retain trees of all sizes and stands of various densities. "Removal of most small trees to reduce wildfire risk may compromise the bet-hedging resilience, provided by small trees and diverse tree sizes and species, against a broad array of unpredictable future disturbances."	We are thinning from below and this is detailed throughout the Forestry section. We are retaining the largest, most fire resistant, disease free trees. Although we have proposed a fuels reduction on <8" trees, we will be leaving some smaller trees that are fire resistant or do not contribute to increased canopy fire risk to act as in-growth and for "bet hedging." Not all medium sized trees will be removed either but instead some will be left throughout the stands to act as recruits to replace the larger, older trees.
Comment 36	Identify and retain all trees with old-growth characteristics even if they are less than 21" dbh. Some refer to these small-old trees as "Tillebo trees" because the late Tim Lillebo was a big advocate for protection of old trees regardless of size. Old growth characteristics include thick bark, colored bark, flat top, asymmetric crown, broken top, forked top, relatively large branches, etc. These trees have important habitat value and human values regardless whether they are 21" dbh. Allow natural processes of succession and mortality turn some of these medium and large trees into ecologically valuable snags and down wood. The agencies often use this technique to identify and retain old-growth juniper trees and the same can be used to protect old growth pine, larch, Douglas-fir and other species.	The BLM agrees. Wildlife trees will be left throughout the project area. These include juniper with old growth characteristics and large ponderosa pine and healthy Douglas-fir that are fire resistant, and trees with signs of wildlife use. The large trees left will not only be the most fire resistant, but contribute to the ecological processes of the project area.

Comment 37	Use diameter limits as a management tool because it provides a useful means to prevent economic values from trumping ecological values. The public supports the use of diameter limits because it provides a means to prevent economic values from trumping ecological values. It is often appropriate to use smaller diameter limits for fire tolerant species like Ponderosa pine and Douglas-fir, while using somewhat larger limits for fire intolerant species like grand fir/white fir. The exceptional circumstances in which diameter limits allegedly don't work, are more rare than the circumstances in which refusing to use diameter limits will lead to unintended consequences, including removal of ecologically valuable trees and lack of public trust.	Although economic values are important and can help facilitate stewardship projects, it is not the driving force of this project. Our intention is to achieve management objectives set forth in the Baker RMP and further stated in the EA (page 3) by: 1) Reducing hazardous fuels 2) Restoring plant communities 3) Improving wildlife habitat diversity Further, as stated in the EA, a thinning from below will leave the largest and best fire tolerant species (pages 9-10).
Comment 38	While the agency embarks on an ambitious effort to reduce fuels and reduce forest density, the agency must also conserve habitat for diverse wildlife that depend on dense forest canopy cover, complex understories, and dead wood. Carbon storage and watershed values are also enhanced when forest cover is maintained. We urge the agency to carefully consider whether there is enough habitat provided for these species, including goshawk, marten, fisher, and pileated woodpecker. The current distribution of recognized and protected habitat areas may be inadequate, especially considering the need for redundancy to account for expected habitat loss from fire, logging, fuel reduction, and natural forest succession. The fact that big game cover requirements need to be amended to accommodate many projects like this raises concerns not just for big game, but for the wide variety of other species that depend on canopy cover, complex understory, and dead wood. Before conducting large-scale density reduction efforts or amending big game cover standards, the agency should carefully consider all the other wildlife that were intended to be sheltered by the "umbrella" of big game cover standards in the RMP. The cover and forage requirements of big game is another lens through which to think about optimizing the mix of treated and untreated stands, as well as the scale and extent	The Mormon Basin Fuels project is only a small portion of an entire area that can support species that need dense/mature canopy and understory for their life history requirements. Areas that have dense canopies and understories may not be a site condition that is healthy for that habitat. This project is designed to incorporate healthy forest use practices throughout the landscape; thus, supporting a variety of species. The BLM did not amend big game cover requirements as Oregon Wild stated. Many of the species Oregon Wild listed do not occur on this project area. A thorough analysis of the potential impacts to wildlife habitat is included in the EA for this project.

	of skips and heavily-thinned "gaps" within treated stands. The NEPA analysis should consider alternatives with different mixes of treated and untreated areas for this purpose. The agency should use a state-and-transition model to project future dense forest habitat recruitment under a reasonable set of assumptions about disturbance and succession.	
Comment 39	Recognize that thinning affects fire hazard in complex ways, including some tendencies to make fire hazard worse. The agency must address the fact that thinning creates slash; moves fine fuels from the canopy to the ground (increasing their availability for combustion); thinning increases ignition risk (by increasing human access and human activities, including spark-generating machinery); thinning makes the forest hotter-dryer-windier; and makes site resources available to stimulate the growth of future surface and ladder fuels. Fuel reduction must find the "sweet spot," by removing enough of the small surface and ladder fuels while retaining enough of the medium and large trees to maintain canopy cover for purposes of microclimate, habitat, hydrology, suppression of ingrowth, etc. The agency should consider alternative canopy treatments that are small and patchy, instead of extensive and continuous. Selective pruning of lower branches should also be considered as a viable canopy treatment.	Slash management is addressed throughout the EA on pg. 11, 69, 73, and throughout Appendix B (104, 106). Human triggered ignition is addressed in the project design elements and is built into every fuels and forestry contract to prevent human caused fires during implementation. The BLM agrees, thinning a forest will spur undergrowth. But it also allows the BLM to use fire as a naturally occurring disturbance agent to help restore ecological processes. Without thinning, a wildfire has the potential to cause serious environmental harm from sterilizing soils, decreasing water quality, wildlife and sensitive plant habitat destruction.
Comment 40	Fire-regime condition-class may not be an accurate predictor of fire hazard, because it assumes incorrectly that time-since-fire is an accurate indicator of fire hazard. There is compelling evidence that time-since-fire has exactly the opposite of the assumed effect, that is, fires may burn more severely in early seral vegetation, and burn less severely in closed canopy forests. This may be related to the fact that closed canopy forests maintain a cool-moist microclimate that helps retain higher fuel moisture and more favorable fire behavior. Odion, D.C., E.J. Frost, J.R. Strittholt, H. Jiang, D.A. DellaSala and M.A. Moritz. 2004. Patterns of fire severity and forest conditions in the western Klamath Mountains, California. Conservation Biology 18(4): 927-	The project area is a relatively low to mid elevation hot-dry and warm-dry forest. Evidence of the fire history is exemplified by ample fire scars on the larger ponderosa pine and a lack of fire scars on the Douglas-fir that has regenerated in the area since fire suppression began with settlement of the area in the late 1800's. Fire history of the project area is further explained on pg. 48-51. As suggested, the warm-dry forests will retain a higher basal area (and canopy cover) than the hot-dry forests to reflect the historic forest conditions.

	936. http://nature.berkeley.edu/moritzlab/docs/Odion_etal_2004.pdf.Canopy cover also helps suppress the growth of ladder fuels. The practical significance of this is that thinning projects should retain more canopy variability across the stand, and need not focus on treatment of canopy fuels except to provide some well-distributed "escape hatches" for hot gases generated by surface fires. Credible models of post-thinning fire behavior, must account for both fuel structure and microclimate effects of thinning.	
Comment 41	There is growing evidence that in order to be effective, mechanical treatments must be followed by prescribed fire. But the effects of such fires must also be carefully considered. Fuel treatments without regular follow-up treatments might be worse than doing nothing at all because thinning can be expected to stimulate the growth of future surface and ladder fuels. Crystal L. Raymond. 2004. The Effects of Fuel Treatments on Fire Severity in a Mixed-Evergreen Forest of Southwestern Oregon. MS Thesis. http://depts.washington.edu/nwfire/publication/Raymond_2004.pdf ; Jonathan R. Thompson, Thomas A. Spies 2009. Vegetation and weather explain variation in crown damage within a large mixed-severity wildfire. Forest Ecology and Management 258 (2009) 1684–1694. Therefore retain plenty of canopy cover to suppress the growth of those future fuels and as insurance against the very real possibility that follow-up fuel treatments may not be adequately funded and implemented.	Retained basal area is described on pg. 45 in Table 3.3. Following mechanical treatment, the EA calls for prescribed fire in as many areas as economically and safely possible to reintroduce a natural process that will mimic native, historical conditions.
Comment 42	Don't thin to uniform spacing. Use variable density thinning techniques to establish a variety of microhabitats, break up fuel continuity, create discontinuities to disrupt the spread of other contagious disturbances such as disease, bugs, weeds, fire, etc. Retain patchy clumps of trees which is the natural pattern for many species.	The EA states that a clumpy and gappy or variable density thinning will be used (pg. 74, 106)
Comment 43	Be creative in establishing diversity and complexity both within and between stands. "Patchy, gappy, and clumpy" is	See the above comment. The BLM is using natural variation that already exists within the stands when designing forest treatments

	often use to describe the distribution of trees in dry forests. Use skips and gaps within units to help achieve diversity. Gaps should be small, while skips should be a little larger. Landings do not make good gaps because they are clearcut, highly compacted and disturbed, more likely subject to repeated disturbance, and directly associated with roads. Gaps should be located away from roads and should not be clearcut but rather should retain some residual structure in the form of live or dead trees.	instead of trying to force a composition or structure.
Comment 44	Thin heavy enough to stimulate development of some patches of understory vegetation, but don't thin so heavy that future development of a uniform understory of ladder fuels becomes a more significant problem than the one being addressed by the current project. 15-20 years after thinning and prescribed fire, the Umpqua NF found "considerable development of less fire tolerant understory vegetation …. Continued stand development … will result in increased understory density and and fuel laddering into the dominant fire tolerant overstory…" Umqua NF, Diamond Lake RD, Lemolo Pine Health Maintenance Burn Project, June 1, 2010 scoping notice.	Please see the silvicultural thinning prescription in the EA on pg. 45 in Table 3.3. The variable density thinning will spur some patches of regeneration and yet retain areas with denser canopy cover and basal areas.
Comment 45	The scale of patches in variable density thinning regimes is important. Ideally variability should be implemented at numerous scales ranging from small to large, including: the scale of tree fall events; pockets of variably contagious disturbance from insects, disease, and mixed-severity fire; soil-property heterogeneity; topographic discontinuities; the imprint of natural historical events; etc.	Based upon our riparian buffers, patchwork of forestry treatments, variable density thinning and selective areas to be burned using several burning techniques, a mosaic will be created mimicking natural fire processes. The BLM will be selecting the techniques used to best mimic native disturbance patterns and improve ecological processes.
Comment 46	Retain and protect under-represented species of conifer and non-conifer trees and shrubs. Retain patches of dense young stands as wildlife cover and pools for recruitment of future forests.	As described in the EA, aspen and mountain mahogany, which are important wildlife habitat plants and often have trouble regenerating under other conifers, will be protected and their habitat improved by removing encroaching conifers. Retaining patches of dense, young stands will increase ladder fuels and greatly increase the likelihood of a stand replacing fire. The BLM understands forest heterogeneity is an important aspect of wildlife habitat and during implementation will look for opportunities to

		retain some dense young stands (excluding thinning/fuels treatment) as long as it doesn't increase ladder fuels to existing stands.
Comment 47	View native insects and disease in an ecological context. They are part of the natural processes that diversify and enrich our forests. They are best viewed as solutions, rather than problems. In particular, mistletoe brooms and seeds (and the large trees that mistletoe often live on) provide many ecological benefits, and treatment efforts are typically ineffective. So mistletoe, insect, and disease treatments have many costs and few benefits.	As clearly stated in the EA, our intention is to achieve management objectives set forth in the Baker RMP by: 1) Reducing hazardous fuels 2) Restoring plant communities 3) Improving wildlife habitat diversity Insect and disease aspect will be viewed in light of achieving these goals. The project area has some forest health issues detailed in Table 3.3 and on pg 42-44. The BLM acknowledges it is simply impossible to eradicate many of these issues but does strive to create a balance of forest health and ecological benefits that are provided by mistletoe brooms. Mistletoe brooms that create ladder fuels will be removed to reduce hazardous fuels. All mistletoe and diseased trees will not be removed to provide the benefit they may give the forested environment.
Comment 48	Recognize that thinning captures mortality and that most stands (especially plantations) are already lacking critical values from dead wood due to the unnatural stand history of logging, planting, and disrupted natural processes.[2] To inform the decision, please conduct a stand simulation model showing that long term snag recruitment (after logging) will still meet DecAID 50-80% tolerance levels.	There are no plantations in the project area. Snags and dead wood will be retained (See the project design elements).
Comment 49	We are concerned that the agencies' stocking guides were created and intended to be used as a tool to avoid mortality which is clearly inconsistent with ecosystem management. ("To preclude serious tree mortality from mountain pine beetle, western dwarf mistletoe and perhaps western pine beetle, stand densities should be maintained below the upper limit of the management zone" Powell 1999. Healthy forests require dead trees, sometimes in abundance, in order to meet the needs of diverse wildlife and provide full suite of ecosystem functions. A comprehensive restoration	All current (at least 3-5 snags/acre) and many large (>20") future ponderosa and Douglas-fir snags will be retained. All areas with large amounts of currently existing dead trees will be left. Trees with obvious wildlife benefits such as hollow tops and nesting cavities will be retained.

	approach requires focusing not just on live trees, but also on the full suite of ecological processes including density dependent mortality processes that create and recruit snags and dead trees as a valuable feature of eastside forests. We urge the agency not to manage for tree vigor and minimum stocking levels because it will not provide enough green trees for recruitment of snags through time. This is a critical issue given that the current standards for snag habitat are outdated and fail to provide adequate levels of snags and dead wood, and adequate levels of green trees needed to recruit those snags through time.	
Comment 50	Retain abundant snags and course wood and green trees for future recruitment of snags and wood. Retention should be both distributed and in clumps so that thinning mimics natural disturbance. Retention of dead wood should generally be proportional to the intensity of the thinning, e.g., heavy thinning should leave behind more snags not less. Retain wildlife trees such as hollows, forked tops, broken tops, leaning trees, etc. Think not only about existing snags but more importantly about the processes the recruit snags, including: a large pool of green trees from which to recruit snags and the existence of competition and other mortality processes. Logging will significantly harm both of these snag recruitment factors. Recognize that thinning captures mortality. To inform the NEPA decision, please conduct a stand simulation model to fully disclose the adverse effects of logging on dead wood, especially long-term recruitment of large snags >20" dbh, and then mitigate for these adverse effects by identifying areas within treated stands and across the landscape that will remain permanently untreated so they can recruit adequate large snags and dead wood to meet DecAID 50-80% tolerance levels as soon as possible and over the long-term.	See response to comment 49.
Comment 51	If using techniques such as whole tree yarding or yarding with tops attached to control fuels, the agency should top a portion of the trees and leave the greens in the forest in order to retain	Fuels reduction is a primary objective of this EA. Increasing the fuels on the ground will further put the stand at risk of a stand replacing fire.

	nutrients on site.	Likewise, the 1989 Baker RMP calls for the management of slash to mitigate fire hazards. Slash management is addressed in the project design elements and description of activities.
Comment 52	Avoid impacts to raptor nests and enhance habitat for diverse prey species. Train marking crews and cutting crews to look up and avoid cutting trees with nests of any sort and trees with defects.	The crews will be informed to spot raptor nests and report them to the wildlife biologist. Although the BLM appreciates your suggestion to maintain trees with defects for wildlife, to suggest not cutting any tree with a defect is unfeasible and seems arbitrary.
Comment 53	Take proactive steps to avoid the spread of weeds. Avoid and minimize soil disturbance. Retain canopy cover and native ground cover to suppress weeds.	The BLM agrees. See the project design elements for weed spread prevention.
Comment 54	Buffer streams from the effects of heavy equipment and loss of bank trees and trees that shade streams. Mitigate for the loss of LWD input by retaining extra snags and wood in riparian areas. Recognize that thinning captures mortality that is not necessarily compensated by future growth.[3]	The BLM agrees with stream buffers and maintaining LWD in stream buffers. Please see project design elements on pg 23-25.
Comment 55	Protect soils by avoiding road construction, minimizing ground-based logging, and avoiding numerous large burn piles. Mitigate the adverse soil impacts from burn piles by inoculating affected sites after burning (with living soil and native plant seeds, Rank new road segments according to their relative costs (e.g. length, slope position, soil type, ease of rehabilitation, weed risk, native vegetation impacts, etc.) and benefits (e.g. acres of restoration facilitated), then use that ranking to consider dropping the roads with the lowest ratio of benefits to costs….Where road building is deemed necessary, ensure that the realized restoration benefits far outweigh the adverse impacts of the road, build the roads to the absolute minimum standard necessary to accomplish the job, and remove the road as soon as possible to avoid firewood theft, OHV trespass, and certainly before the next rainy season to avoid storm water pollution. Do not allow log hauling during the wet season.	No permanent roads will be constructed. Cable logging will be used whenever feasible to minimize erosion. The proposed three miles of temporary road will access areas in need of fuels reduction that could not otherwise occur. Temporary road construction and reclamation is addressed within the EA. See project design elements for further environmental protections dictating construction on pg 23-25.
Comment 56	There is a carbon cost associated with thinning that must be	Without fire, simply increasing woody biomass does increase

	disclosed and considered. As stands develop from young to mature to old, they continuously recruit carbon-rich material from the live tree pool to the dead wood pool. Some of that wood gets incorporated into the soil or falls in fire refugia where it can accumulate. Logging, even thinning, can dramatically affect the accumulation of carbon in the dead wood pool by capturing mortality, diverting it from the forest, and accelerating the transfer of carbon to the atmosphere. Carbon stays out of the atmosphere much longer if it remains in the forest as live and/or dead trees, instead of being converted to wood products and industrial and consumer waste.	sequestered carbon (which influences climate change). But we must also manage for the very real possibility of a stand replacing fire that could turn the forest into a net carbon source. Fire exclusion is partially responsible for the increased threat of large stand replacing fires and releasing large amounts of carbon. The BLM proposes to reintroduce natural fire regimes into the project area to mimic historical conditions, while maintaining carbon sinks and managing to increase future sinks. Further, excluding fire does not take into account restoring natural processes and the historical range of variability within the project area as Oregon Wild has requested of the BLM. Increased juniper is not only occurring at unprecedented levels, it has increased the risk of large stand replacing fires, increased fire spread, and compromises safety of wildland fire fighters and those with homes within the juniper woodlands. Increased wildfires of this size dramatically release carbon into the atmosphere.
Comment 57	If this project involves biomass utilization, the impacts need to be clearly disclosed. How will the biomass be moved from the remote corners of the treatment areas to the landings? Will there be extra passes made by heavy equipment? Will the landings be enlarged to make room for grinders, chip vans, and other equipment? Can the local forest roads accommodate chip vans? Will the roads be modified to make them passable by chip vans? What are the impacts of that? What are the direct, indirect, and cumulative impacts on soil, water, wildlife, and weeds?	Biomass utilization will occur at landing sites so no extra passes by heavy equipment will need to be made. Landings will not be enlarged (existing landings from previous projects will be utilized) but careful planning (such as piling above the road so chippers/trucks can access the pile) will be conducted to allow utilization. Utilization will not occur on roads that are not passable by chip vans. Because of this congruence, biomass utilization was included in the analysis in each of the soil, water, wildlife, and weeds sections in the Mormon Basin/Pedro Mountain Fuels Management EA.
Comment 58	Provide clear and detailed descriptions of silvicultural prescriptions and marking guides in the NEPA document.	Table 3.3 of the Mormon Basin/Pedro Mountain Fuels Management EA clearly states the existing and target basal areas of each forest type. Further direction is given in section 3.5.4.
Comment 59	Recognize that federal fuel reduction efforts likely have adverse unintended effects on human behavior and land use and fire hazard. “This project has explored the hypothesis that	Several surrounding local landowners are also conducting fuels reduction and fire prevention efforts on their own land. This project has been coordinated with them to maximize the

	public fire suppression in fire-prone areas acts as a subsidy to landowners, incentivizing conversion of land to residential and commercial development. Landowners do not bear the full cost of their choice to build on land in fire-prone areas, since they do not pay for suppression, though they reap all of the benefits, potentially resulting in economically inefficient levels of development. … Results suggest that when federal suppression efforts intensify on public lands, private development accelerates nearby. The main paper produced by the funded research thus shows that public investment in reducing the damages from fire in the short run causes unintended long-run behavioral responses, which may increase future hazard exposure." Sheila Olmstead (PI), Carolyn Kousky (co-PI), Roger Sedjo (co-PI) 2013. Final Report to the Joint Fire Science Program Wildland Fire Suppression and Land Development in the Wildland/Urban Interface. http://www.firescience.gov/projects/10-3-01-33/project/10-3-01-33_final_report.pdf	effectiveness of the efforts. The surrounding area has no history of being converted to residential or commercial development. It is away from any major urban and development areas and is highly unlikely to be further developed in the foreseeable future.
Comment 60	Unless responded to below, the subcomments have been addressed in other responses or in the EA.	
	b. Removal of commercial sized logs can make the stand hotter, dryer, and windier, making fire hazard worse instead of better;	Juniper is outside its historic distribution and stocking on the landscape greatly increasing fire potential. The forested stands within the project area are also overstocked and outside the historical range of variability. With the exclusion of fire - a natural process - the species composition, distribution and structure has changed. It has moved from a forest dominated by large, widely spaced ponderosa pine to a forest with a higher and younger Douglas-fir component. These species did coexist on many sites and our prescription is to retain the large ponderosa and Douglas-fir and thinning the understory while mitigating large wildfire potential and protecting snags and large woody debris.
Comment 61 **Temp roads**	The November 2000 National Forest Roadless Area Conservation FEIS p 3-30 says that temporary roads are not designed and constructed to the same standard as classified roads and therefore result in a "higher risk of environmental	In this document it states "Temporary roads present most of the same risks posed by permanent roads, although some may be of shorter duration." Even though they acknowledge it can be a shorter duration, they do not address the issue present in the

	impacts." The NEPA analysis must account for this increased risk of temporary roads compared to permanent roads.	Mormon Basin/Pedro Mountain Fuels Management EA where temporary roads WILL BE decommissioned within a single year. In addition, see project design elements for further environmental protections (pg. 23-25) dictating temporary road construction and decommissioning. In general, these roads will be fractured to mitigate soil compaction, slashed to mitigate erosion and prevent future access and seeded to restore vegetation all within the same year. Luce, C.H., 1997. Effectiveness of Road Ripping in Restoring Infiltration Capacity of Forest Roads, Restoration Ecology; 5(3):265-270. was conducted on permanent roads (and of an unknown usage duration or type of usage) not on temporary roads as Oregon Wild states.
Keith and Susan Jones **Email received Feb 19 2015** **Comment 62**	No mention of Blue and Ruffed Grouse, Chukar, Partridge, Turkeys, Bighorn Sheep, Antelope, Black Bear and Cougars in the EA.	BLM land use handbook defines what the BLM analyzes under NEPA. For wildlife, this would include threatened, endangered, BLM special status species, and species of local importance. Of the species listed, bighorns would qualify as a species of local importance because there is a local special interest group and are a concern for the tribes. However, according to ODFW, records for bighorn home ranges do not extend to the Mormon Basin Fuels project area.
Comment 63	Roads should not be closed	According to the EA, no roads will be closed. No more than three miles of temporary are proposed for construction which will be immediately restored within a single season.
Comment 64	Photo mislabeled	Thank you for the date correction. We will inform the library.
Comment 65	Invasive grasses/weeds need to be controlled	Invasive weed control through herbicide application is proposed in the EA and will be incorporated into the project.
Comment 66	Leks need to be identified in the EA.	No known leks occur within the project area as stated on page 33. The project design elements include protection for sage grouse in case a new lek is found.
Comment 67	Water temperatures are within the project area are warm due to the project area being lower in elevation than many of our mountain ranges in the region.	This is confirmed in the EA.
Comment 68	There are flash floods in the project area that alter stream banks more than humans	Large rainfall or snowmelt events do impact the project areas streams and were considered in the analysis. Please see the waters section. There has also been extensive mining that affected

		riparian areas within the project area that was addressed in the EA. In areas where historic grazing has reduced riparian condition and juniper encroachment restricts its recovery, the proposed action will improve riparian condition and it's resilience during flash floods.
Comment 69	Use of the word "potential" when analyzing	The BLM is committed to striving towards a healthy functioning ecosystem. As such, efforts are made to survey the proposed project area for potential threatened, endangered, BLM designated sensitive and species of local importance. The BLM then analyzes how the proposed project will affect these species even if they are not within the project boundary. Although these species may not occur in the project area the habitat is of potential use if populations expand, so the BLM analyzes this scenario.
Comment 70	Deer fawning habitat is inaccurate	Thank you for catching this oversight within the EA. We have removed this sentence from the final EA. Within the Baker Resource Area, there are no fawning grounds that are identified by the ODFW. Only critical winter and summer ranges have been defined.
Comment 71	Conifer expansion should sequester more carbon. Shouldn't the BLM promote this?	While simply increasing woody biomass does increase sequestered carbon, it does not take into account restoring natural processes and the historical range of variability within the project area. Increased juniper is not only occurring at unprecedented levels, it has drastically increased the risk of large stand replacing fires, increased fire spread, and compromises safety of wildland fire fighters and those with homes within the juniper woodlands. Increased wildfires of this size also dramatically increase the release of carbon into the atmosphere.
Comment 72	Climate change is just an opinion.	While it is true that there are a lot of unknowns in how severe the effects of climate change will be, the BLM recognizes that climate change is influencing the West. "In the Northwest, higher temperatures are causing more winter precipitation to fall as rain rather than snow and are contributing to earlier snowmelt. Further declines in snowpack are projected, leading to reduced summer streamflows (USGCRP, 2009)." Although, one year doesn't show a trend, we have certainly seen an early snowmelt within project area this year, as you stated in your comments, the snow was gone

		in mid-February. http://www.globalchange.gov/ has a wealth of information.
Arvid Andersen **Letter received Feb. 20, 2015** **Comment 73**	Bark beetles and mistletoe should be addressed and coordinated with private landowners.	When it is also consistent with the objectives of the EA, mistletoe and bark beetles will be addressed in forest treatments through removal of trees that both create increased risk of large stand replacing fires and have the health issues mentioned. Local landowners have been notified and coordination will continue.
Comment 74	Agrees with basal area targets for retention	Thank you for your comment.
Comment 75	Do not restrict by DBH limits.	This is not proposed. It is stated that "most of the larger (e.g., greater than 23in dbh) ponderosa pine, Douglas-fir and larch, located in stands, will be retained" on pg. 75.
Comment 76	Wildfires have caused loss of private forests	The BLM agrees and this project will be coordinated as closely as possible with local landowners to reduce the severity of any future wildfires.
Comment 77	Mule deer fawning is incorrect	Please see response to comment 70.
Comment 78	No mention of blue grouse habitat.	Please see response to comment 62.
Chuck Chase **Email received Feb. 20, 2015** **Comment 79**	Reading through the EA on the Fuels Management Project Sec. 3.4.1.: I notice there are huge gaps in the management plan. Most of the wildlife was left out of the EA, including Chukar, Ruffed Grouse, Turkeys, or Partridge. Sec. 3.4.4.: Also I noticed that there was no mention of Big Horn Sheep, Cougars, Antelope or any Bear included in the EIS.	Please see response to comment 62.
Comment 80	Page 7, Roads, 1: Almost every road in the management area are either old mining or roads built by the ranchers near the turn of the century and are used by both miners and ranchers and of course listed as county roads under 2477 law.	Please see response to comment 63.
Comment 81	Page 23, 2.5: Juniper control except 2 mile buffer around Sage Grouse Leks. To my knowledge and people that live and ranch in the area there are no Leks. If so these Leks need to be identified and a Environmental Assessment done on these Leks to make sure they are adequately protected.	Please see response to comment 66.
Comment 82	Page 28, 3.2 Water quality/Wetlands Riparian: There are no	Please see response to comment 67.

	snow packs to sustain these upland streams and intermittent creeks. These creeks suffer from the extreme temperatures of summer heat loosing their cooling snow run off in early spring. Water temperatures warm or dry up these creeks leaving only a trickle of water to sustain the fish and wildlife, and cattle through the summer months.	
Comment 83	Page 29- Stream and Riparian System Stability: Steams, creeks, intermittent, gullies and washes are subject to flash flooding in the spring run offs and cloud bursts. These flooding events cause more damage than man has since he first set foot on the ground. The positive riparian's and stream enhancement done by man can be negated by just one flood event. Nature, and not man dictates the nature and direction of stream ecology, including riparian and erosion of stream beds in the E.A scoping area.	Please see response to comment 68.
Comment 84	Page 31, 3.4 Fish and Wildlife, Under BLM Special Status Wildlife: It seems in this whole document the main scope is all about Sage Grouse leaving out every other species as if they were nonexistent.	Please see response to comment 62 and 66.
Comment 85	Page 33, Townsend's Bat: The continued use of "Potential Habitat" means what? That the so named species may move into this habitat that they haven't lived in for over a hundred years? I believe that this is a extreme overreach in the drafting of the EIS.	Please see response to comment 69.
Comment 86	Page 39, 3.5 1. & 2. Noxious Weeds: The BLM keeps bringing up encroaching noxious weeds while doing nothing to stop this encroachment by spraying the weeds. They have even stopped miners from spraying their required reclamation for noxious weeds. The only people that seems to be trying to stop the encroachment of noxious weeds is the private land owners. That is an ongoing problem with wind blowing seeds from BLM onto and contaminating private land.	Please see response to comment 65.
Comment 87	Page 43 & 44, Bark Beetles and Cammandra Rust: There are no Bark Beetles in the EA area for the simple reason that the area is too low lying, along with lodge pole pine species. This is an example of more inaccuracies in the EIS Document.	There are bark beetles within the project area. The Forest Service Blue Mountain Pest Management Service Center has inspected the area on multiple occasions and submitted reports that are available in the administrative record.

Comment 88	Page 45. 3.6 Cultural Resources: Mining towns dotted the landscape, placer and dredge tailings and the remains of building clustered around large hard rock mines that dot the Mormon Basin rim, along with grave yards and even a hanging tree, where a lot of bad people met their fate. I guess your right about highly developed but the hand of man is everywhere you look over the landscape. The EIS, it seems, has ignored the rich history of the area and would leave one to believe that it was a pristine untouched area to be conserved and protected.	The cultural resources sections objective is not to write an exhaustive history of the area, but to discuss the cultural resources in the area and how they pertain to the proposed actions. It is true the area has a long and interesting history that could fill a book, although, that is not the purpose of the EA.
Comment 89	Page 52, 3.10 Recreation: There are a lot of land locked parcels dotting the landscape like those on Pedro Mountain, that are completely blocked off from the public. These land locked parcels should be traded to square up both private and public lands.	All parcels of Public Land are zoned for either retention, or disposal by various means. This is however, outside the purpose and need of this EA.
Comment 90	Page 53, 3.12 Climate Change: The promotion of Climate Change is just about as accurate as the rest of the document, and just about as factual.	Please see response to comment 72.
Mark Bennett (Baker County Commissioner) Letter received Feb. 20, 2015 **Comment 91**	Potential for road closures	Please see response to comment 63.
Comment 92	Invasive/noxious weeds	Please see response to comment 65.
Comment 93	Failure to thoroughly address the populations of: Blue and Ruffed Grouse, Chukar, Turkeys, Big Horn Sheep, Antelope, Black Bear and Cougars	Please see response to comment 62.
Comment 94	The Greater Sage Grouse Leks have not been identified in the document and therefore it is unclear where exactly that Juniper Treatments will occur.	Please see response to comment 66.